Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Claim Objections

Claims 1, 19 and 24 have been amended to address the Examiner's objections. Accordingly, the objections should be withdrawn.

Claim Rejections - 35 USC § 102

Claims 1, 3-19, and 21-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hatcher et al (WO 99/59106). The Examiner construed the claims broadly and responded as follows:

> Applicant's arguments filed 10/6/08 have been fully considered but they are not persuasive. Applicant argues that Hatcher does not disclose providing for the three dimensional generic model to be adapted in two dimensional space by data linking the three dimensional generic model with patient characteristic, two dimensional detection data. Applicant goes on to point out that Hatcher discloses creating a three dimensional patient specific model based on acquired images and modifying a three dimensional stock model based on the created three dimensional patient specific model. <u>Examiner does not disagree with Applicant's assessment of Hatcher.</u> However, the claimed language only requires that the generic model be adapted by data linking the generic model with the 2D detection data. In Hatcher, the stock (or generic) model is adapted is based on the patient-specific model, which is based on the 2D images. Therefore, the stock model is 'data linked' to the 2D images through use of the patient-specific model. <u>Without further describing how the generic model is data linked to the 2D detection data in a manner that excludes the intermediate data, the claim do not distinguish over Hatcher.</u>
>
> [December 10, 2008 Office Action at 2-3, emphasis supplied]

In accordance with the Examiner's response, independent claims 1, 19 and 24 have been amended to clarify the step of "creating patient-specific body structure data" and to focus the subject matter of the pending claims on computer-assisted medical

navigation with the patient being in position for treatment. Additionally, dependent claims 8, 10, 14, 18, and 21 have been amended for consistency with amended claim 1 and to correct typographical errors.

The invention recited in independent claims 1, 19 and 24 includes, *inter alia*, detecting a position of a patient or a part of a patient, detecting positions of medical treatment devices and assigning the detected positions to created patient-specific body structure data. Creating patient-specific body structure data includes:

projecting a three-dimensional generic model onto the acquired patient-characteristic, two-dimensional detection data,

adapting the projection(s) of the three-dimensional generic model to the information of the patient-characteristic, two-dimensional detection data, and

adapting the three-dimensional generic model to conform to the adapted projection(s) of the three-dimensional generic model.

The claimed invention includes the provision of superimposing a three-dimensional generic model onto patient-specific two-dimensional detection data (e.g., x-rays) and adapting a projection of the generic three-dimensional model to the respective two-dimensional detection data (e.g., x-rays). Unlike conventional methods, including the method described in Hatcher, the claimed invention provides for the three-dimensional generic model to be adapted in two-dimensional space by data linking the three-dimensional generic model with patient characteristic, two-dimensional detection data.

Hatcher has not been found to disclose, in a manner like that recited in claim 1, creating patient-specific body structure data by:

projecting a three-dimensional generic model onto the acquired patient-characteristic, two-dimensional detection data,

adapting the projection(s) of the three-dimensional generic model to the information of the patient-characteristic, two-dimensional detection data, and

adapting the three-dimensional generic model to conform to the adapted projection(s) of the three-dimensional generic model.

Rather, Hatcher is understood to disclose creating a three-dimensional spatial structure of the patient (e.g., patient-specific model) based on acquired images and modifying a three-dimensional stock model based on the created three-dimensional spatial structure corresponding to the patient. As such, Hatcher is understood to disclose that the stock model is "painstakingly adapted in three-dimensional space."

In contrast, the claimed invention provides patient-specific body structure data by data linking a three-dimensional generic model with patient characteristic two-dimensional detection data such that the three-dimensional generic model is adapted in two-dimensional space.

Therefore, the anticipation rejections of claims 1, 19 and 24 should be withdrawn because Hatcher does not disclose all elements recited in the respective claims.

The dependent claims, while reciting additional features, are not being independently discussed in as much as they are allowable for at least the same reasons as the independent claims from which they depend. This absence of a comment regarding the dependent claims, however, should not be construed as an acquiescence to the contentions made in the office action.

Telephone Interview

If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By___/John J. Del Col/_____
John J. Del Col, Reg. No. 43,582

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113